

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A method of controlling an element of a medical device within a patient's body which is responsive to a magnetic field, the method comprising applying at least two different magnetic fields to the element within the body to control the element, the magnetic fields having different angular relationships between the field direction and the gradient.
2. (Original) The method according to claim 1 wherein in one of the magnetic fields applied to the element, the gradient is substantially parallel to the field direction and wherein in another of the magnetic fields applied to the element the gradient is substantially perpendicular to the field direction.
3. (Original) The method according to claim 2 wherein one of the fields applied to the element is an end field of a permanent magnet and one of the fields applied to the element is a side field of a permanent magnet.
4. (Original) The method according to claim 3 wherein the permanent magnet is a multipole permanent magnet.

5. (Original) The method according to claim 4 wherein the multipole permanent magnet is a quadrupole permanent magnet.
6. (Original) The method according to claim 1 wherein the magnet fields are applied with at least one permanent magnet.
7. (Original) The method according to claim 1 wherein the magnetic fields are applied with at least one permanent magnet.
8. (Original) The method according to claim 7 wherein the at least two fields are applied to the element by changing at least one of the position and orientation of the magnet with respect to the patient.
9. (Original) The method according to claim 1 wherein the magnetic fields are applied with at least one electromagnetic coil.
10. (Original) The method according to claim 9 wherein the at least two fields are applied to the element by changing at least one of the position and orientation of the magnet with respect to the patient.
11. (Original) The method according to claim 10 wherein the magnetic fields are applied with at least one superconducting electromagnetic coil.

12. (Original) The method according to claim 11 wherein the at least two fields are applied to the element by changing at least one of the position and orientation of the magnet with respect to the patient.

13. (Original) The method according to claim 11 where the superconductor coil has a mechanical refrigerator associated with it for maintaining the superconducting state of the superconducting magnet coil.

14. (Currently Amended) An improved method of controlling an element of a medical device within a patient's body which is responsive to a magnetic field through the controlled application of magnetic fields, the improvement comprising successively applying at least two different magnetic fields in which the angle between the magnetic field direction and the gradient are different.

15. (Currently Amended) A method of controlling an element of a medical device within the human body which is responsive to an applied magnetic field, the method comprising applying a series of magnetic fields including fields in which the magnetic gradient is negligible for orienting the element along the field direction and fields in which the magnetic gradient is non-negligible and oblique to the magnetic field direction for pulling the element in a direction different from the orientation of the element.

16. (Currently Amended) A method of controlling an element of a medical device with the human body which is responsive to an applied magnetic field, the method

comprising applying a series of magnetic fields to control the element including fields in which the direction and strength of the magnetic gradient is negligible for orienting the element along the field direction and fields in which the magnetic gradient is non-negligible and oblique to the magnetic field direction for pulling the element in a direction different from the orientation of the element.

17. (Currently Amended) A device for magnetically assisted surgery **[[ef]]** utilizing a medical device within a patient comprising: a magnet support structure; a magnet having at least four poles, the magnet attached to the magnet support structure so that the magnet provides a near-field magnetic field in an operating region within a patient, the magnet being moveable to alter a direction of magnetic field lines in the operating region within the patient.

18. (Original) The device of claim 17 wherein the magnet is a quadrupole magnet.

19. (Original) The device of claim 18 wherein the magnet is a permanent magnet.

20. (Original) The device of claim 19 wherein the magnet is generally cylindrical and has a radius and an axis perpendicular to its radius.

21. – 37. (Cancelled)

38. (Currently Amended) A device for magnetically assisting surgical operations **utilizing a medical device within a body**, the device comprising: a magnetic delivery vehicle configured to be introduced into a patient; a magnet support base; and a magnet assembly adjustably supported on the support base and positionable thereon to provide a magnetic field of specified direction and having an transverse gradient at a location in which the magnetic delivery vehicle is introduced into a patient supported by the patient support structure.

39. (Original) The device of claim 38 wherein the magnet assembly comprises a computer-controlled robotic arm having a magnetic effector.

40. (Original) The device of claim 37 and further comprising a medical imaging device configured to provide a relative location and orientation of the magnetic delivery vehicle, the magnet assembly, and the operating region of the patient.